



HUMAN ELEMENTS



County of San Bernardino

Department of Public Health

Division of Environmental Health Services

| NEXT >



COUNTY OF SAN BERNARDINO

Environmental Health Services

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The Division of Environmental Health Services (DEHS) is the agency designated by the State of California and the County of San Bernardino to enforce laws and regulations regarding food protection, recreational health, vector control, safe drinking water, housing, organized camps, body art, medical waste, wastewater, solid waste, land-use, and emergency operation response. Through inspections and educational efforts, DEHS helps facility operators and other stakeholders achieve compliance with these laws and regulations. Environmental health affects everyone, whether it is drinking water, dining out at restaurants, swimming in a public pool or simply walking outdoors. The services provided by DEHS are crucial to promoting public health and safety.



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FOOD PROTECTION SECTION

Community Environmental Health Program



Improper Food Handling Makes 294 People Ill with Salmonella

On April 26, 2013, a foodborne illness outbreak investigation was prompted when 8 independent groups of patrons of the Firefly Tapas Kitchen and Bar in Las Vegas, NV reported to be suffering from a gastrointestinal illness. The number reported quickly grew from 86 patrons and 3 employees to a total of 294 people from 27 states and 2 foreign countries. The investigation uncovered many unsafe food handling practices including handling food with unwashed bare hands, storing food at improper temperatures, and using improper cooling procedures. Due to the many “imminent health hazards” found, the Southern Nevada Health District enforced a closure to help stop the spread of the disease.



What is a Foodborne Illness?

A foodborne illness (FBI) is a very serious and costly, yet preventable public health issue that is caused by consuming contaminated food or beverages.

DID YOU KNOW?

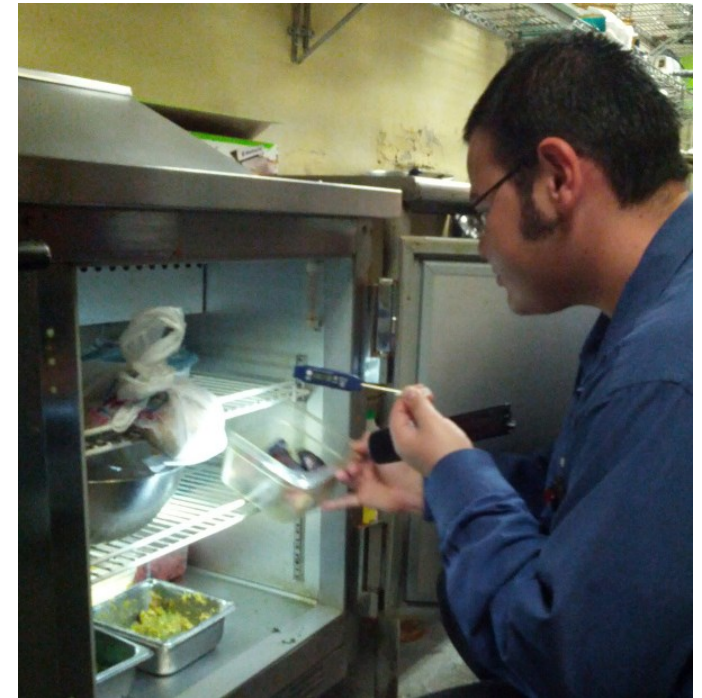
Foodborne infections like Campylobacter, Hepatitis A, Salmonella, E. coli, Listeria, Norovirus and botulism can lead to blindness, kidney failure, hearing impairment, paralysis, and permanent neurological damage, and even death.

A foodborne illness can affect anyone.



Environmental health inspectors make sure contaminated food doesn't make it to your plate.

Due to the high volume of food served, a food service establishment faces hygiene and sanitation challenges every day. One lapse in food handling can potentially cause many consumers to become ill and can negatively affect the business. **The best line of defense against foodborne illness is prevention.**



DEHS aims to reduce and prevent incidents of foodborne illness through inspections and education.

DEHS conducts routine inspections in restaurants, grocery stores, markets, mobile food facilities, temporary food facilities, schools, hospitals and other related retail food establishments for compliance with health and safety code requirements.

DEHS also investigates complaints of suspected foodborne illness, unsanitary conditions, and other related problems. All foodborne illness complaints are investigated within 24 hours. Follow-up inspections are conducted as needed to ensure protection of the public's health.

DID YOU KNOW?

More than 54 billion meals are served at 844,000 commercial food establishments in the United States each year. Restaurant meals make up 46% of the money Americans spend on food. On a typical day, 44% of adults in the United States eat at a restaurant.



See your favorite restaurant's inspection report [here!](#)

What happens if critical violations are found during an inspection?

Major or critical violations are the most significant risk factors contributing to foodborne illness outbreaks, and are clearly an imminent health hazard to public health and safety.

DEHS health inspectors ensure all critical violations are corrected during the inspection, and educate the operators on the importance of food safety. **When a critical violation cannot be immediately corrected, or a suitable alternative found, the food establishment may be subject to closure.**

DEHS Routine Inspections

Food establishment inspections are conducted twice a year. A grading system based on the varying degrees of risk is used as an indicator of compliance. Each food facility inspection begins with 100 points. The point value from each marked violation is summed and this total is then deducted from the initial 100 points. The grading scale is shown below:

100 TO 90 POINTS	A
89 TO 80 POINTS	B
79 TO 70 POINTS	C
BELOW 70 POINTS	CLOSURE

NOTE: The grade or score the food facility receives reflects the status of the food facility at the time of the inspection only.





How does DEHS assist operators with compliance?



Education plays a vital role in preventing foodborne illness. In April 2012, DEHS implemented a proactive Food Safety Health Education Program known as HELP.



Through free, non-scored, mock inspections, HELP assists operators in assessing their food operation. It allows them to ask questions one-on-one, provides instruction tailored to the needs of their operation, and incorporates methods associated with the dynamics of their facility.



HELP ultimately provides food operators with the education and confidence to safely control and monitor their daily tasks. All food facilities are encouraged to participate.



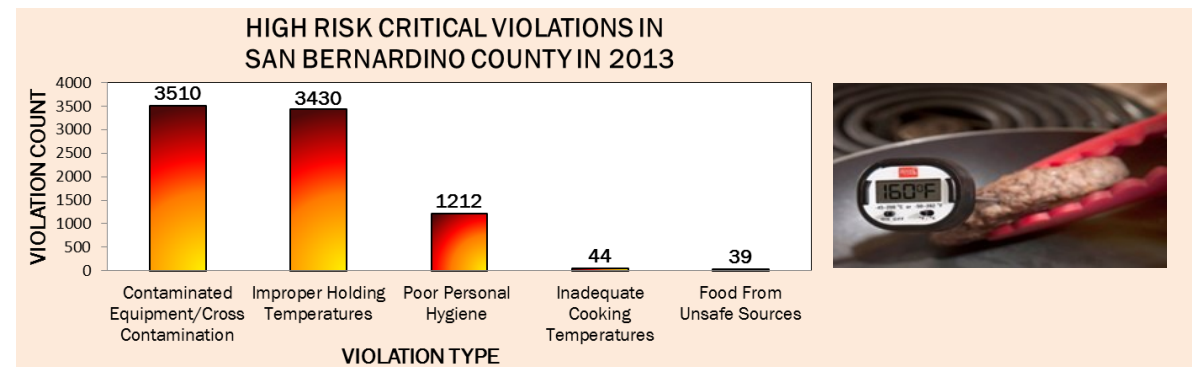
Learn more about our Food Safety HELP [here!](#)



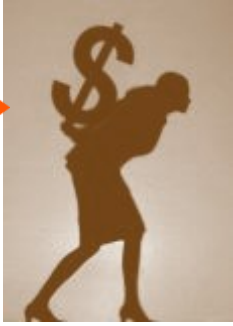
2013 Report

During the 2013 calendar year, 1,094 food service establishment complaints were investigated. Approximately 8.6% of those complaints were foodborne illness related.

In addition, DEHS conducted over 16,000 routine inspections, and cited approximately 12,000 critical violations. Nearly 4,000 follow-up inspections were conducted to ensure compliance. **Approximately 69% of all critical violations cited in 2013 were considered high risk for contributing to a foodborne illness.** See the table below.



NOTE: Facilities that participated in HELP, on average, achieved a 28% reduction in the number of high risk critical violations cited during their next routine inspection.



Estimated National Economic Burden of Foodborne Illness

Foodborne illness causes the U.S. an economic burden of approximately \$77.7 billion each year in medical expenses, quality of life adjustments, and illness-related death, with an average cost of \$1,068 per case. These substantial numbers do not include costs related to the food industry or the public health agencies.

A restaurant implicated in an outbreak pays an average of \$50,000 in expenses.

What would life be like without DEHS?

Despite efforts made by health departments across the nation, the CDC estimates that approximately 1 in 6 Americans become ill, 128,000 are hospitalized, and 3,000 die each year from foodborne illness. **This means approximately 346,886 residents in San Bernardino County could potentially get a foodborne illness each year.**

However, without frequent and routine oversight by a regulatory agency, the public may be at increased risk for foodborne illness, and food establishments may lose business due to increased complaints.

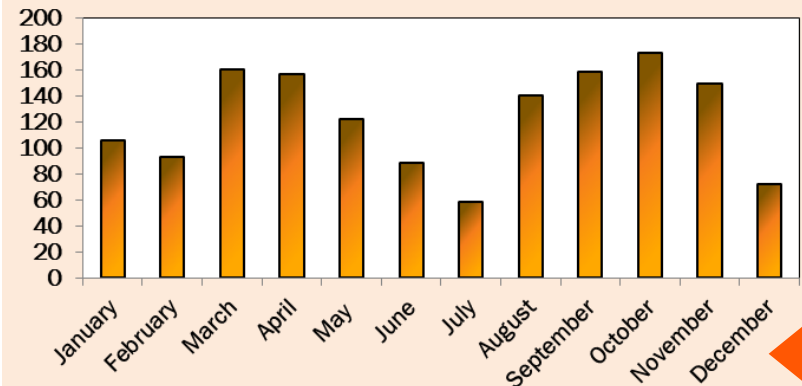
In 2012, the state of Maine reduced the frequency of restaurant inspections to once every 2 years. Findings confirmed that “the number of complaints that lead to restaurant inspections has increased 87 percent since 2008, including a 35 percent jump after the Legislature doubled the amount of time between mandatory inspections.”

Through education, routine risk-based inspections, and immediate complaint investigations, DEHS aims to maintain safe and thriving food service establishments.

DID YOU KNOW?

In the 2013 calendar year, nearly 1,500 Voluntary Condemnation & Destruction Violations (VC&D) were cited. See table below. This means nearly 1,500 times, 1 or more food items were found to be adulterated/contaminated and were discarded. Imagine if DEHS did not discover the adulterated/contaminated items and the food was served to customers.

VOLUNTARY CONDEMNATION & DESTRUCTION VIOLATIONS IN 2013



Click here to learn more about DEHS's Food Protection section online!



RECREATIONAL HEALTH SECTION

Community Environmental Health Program





Swimming Pool Safety

DEHS plays a vital role in promoting pool safety at nearly 2,800 recreational health facilities in the county. Inspectors identify hazards and provide education for operators to correct dangerous conditions. This applies to:

- Public swimming pools and spas
- Waterslide resorts
- Playgrounds with splash pads
- Swim beaches at lakes



DID YOU KNOW?

Each person carries over an eighth gram of fecal matter into a pool each time they swim. Without proper water filtration and disinfection, many swimmers would get sick with severe symptoms such as diarrhea, skin rashes, and infections.

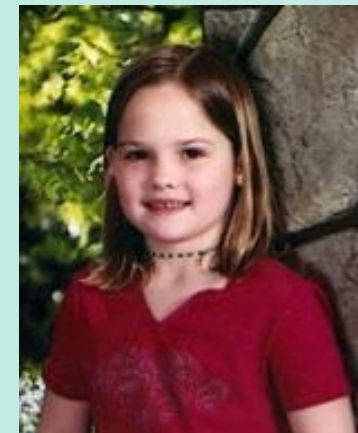
Pools in Violation

A CDC study found that about one in eight public pool inspections led to closures due to serious code violations. Without inspections, this number is likely to increase.



Second-grader dies from suction hazard

Virginia became entrapped by a drainage grate while playing in a spa. Upon hearing the news, her mother quickly jumped in to rescue the girl. She saw her daughter's eyes pinched closed and her limbs being pulled in different directions by the suction forces. Her mother used all her strength to try and free Virginia, but her attempts were no match for the hundreds of pounds of force created by the suction. It took two other adults to finally free the child. Tragically, the little girl was dead at only 7 years of age.



Virginia Graeme Baker



Safety Inspections Conducted by DEHS

DEHS inspects all natural and artificial public swimming places in the county. In addition to the 2,800 public pools and spas inspected, DEHS also inspects public swimming places such as lakes, waterslides, and waterparks. Twenty-one lakes and eleven slides are inspected countywide for potential health and safety hazards.

Lakes and Waterslides

DEHS ensures that recreational health equipment at a lake or lagoon is in good working order. DEHS monitors the safety of waterslides, inflatable bouncing water blobs, zip lines over the lake/lagoon, etc.

DID YOU KNOW?

*The Centers for Disease Control and Prevention (CDC) estimates that **10 people drown each day**.*

For every death caused by drowning, up to 5 nonfatal pool accidents result in hospitalization or emergency department care.

Keeping Lakes Safe

DEHS monitors water clarity in lakes and lagoons, as murky water presents a drowning hazard. DEHS also monitors pH levels and bacterial/coliform levels. DEHS will close lakes and lagoons for elevated bacterial levels or for low water clarity until the problem is corrected. DEHS also ensures that there are a sufficient number of lifeguards on staff at the lake or lagoon.





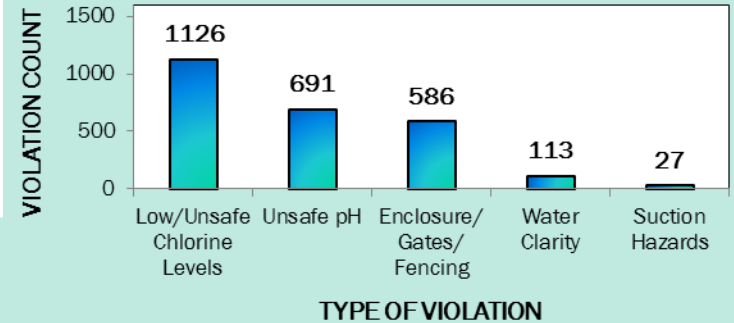
How is DEHS involved with recreational health?

During the summer of 2012, DEHS conducted nearly 5,000 routine inspections and cited over 14,000 health and safety violations at public pools and spas in San Bernardino County. In addition, inspectors investigated more than 150 complaints.



DID YOU KNOW?

Drowning is the leading cause of death among children ages 1 to 4 in the United States.



Understanding the Numbers

In the graph above, each of the 586 enclosure violations cited in 2013 represents a potential drowning hazard for a young child. Furthermore, each of the 1,126 chlorine violations represents an opportunity for swimmers to get sick from water with no disinfectant, such as chlorine, or a dangerously high level of disinfectant. Without addressing these critical violations, swimmers can be exposed to many hazards. Harmful bacteria and viruses can be passed from swimmer to swimmer without proper water disinfection. Such was the case in 2007 with a *Cryptosporidium* outbreak in Utah that led to a temporary ban on young children from using public pools after 1,902 people became ill. Common waterborne diseases such as cryptosporidiosis, giardiasis, and Legionnaires' disease cost the US health care system approximately \$539 million each year.

What would life be like without DEHS?

It is estimated that 15% of all non-residential pools and spas in the county would have critical safety hazards. Without corrective action, critical safety hazards may lead to serious waterborne illness, injury, or death. A recent study by the CDC found that nearly 60% of pools sampled contain *Pseudomonas aeruginosa*, a bacteria that can cause skin rashes and ear infections. About 58% of pools sampled were positive for *E. coli*, indicating fecal contamination.



Click here to learn more about DEHS's Recreational Health section online!



MOSQUITO AND VECTOR CONTROL SECTION

Land Use Protection Program





What is a Vector?



A vector is any insect, rodent or animal of public health significance capable of transmitting pathogens of human disease.



The Frontline of Defense

Under DEHS, the Mosquito and Vector Control (MVC) section protects public health and safety of County residents and visitors through:

- Proper application of combined vector and pest management practices
- Proactive disease surveillance
- Education
- Enforcement

DID YOU KNOW?

The second worst outbreak of West Nile Virus (WNV), a vector-borne disease associated with mosquitoes, occurred in 2012. The CDC reported a nationwide total of almost 6,000 confirmed human cases and nearly 300 deaths, all attributed to WNV. WNV infected approximately 500 Californians; Thirty-three confirmed cases were reported in San Bernardino County.

Service Requests

MVC technicians respond to citizen complaint/service requests for community control of:

- Mosquitoes
- Ticks
- Flies
- Rats
- Wasps
- Bed bugs
- Fleas
- Cockroaches
- Africanized Honeybees

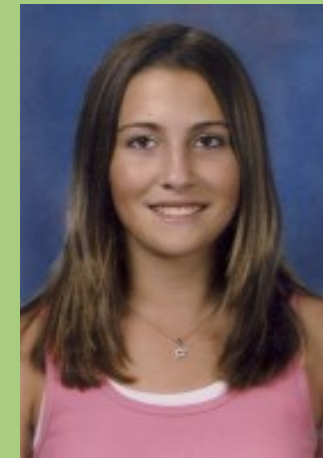


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Teenager Loses Battle Against West Nile Encephalitis

Lauren Ashley Miller from Menifee, CA contracted West Nile Virus in 2004 when she was 13 years old after being bitten on her legs by mosquitoes. Lauren later developed encephalitis and her brain swelled, which left her in a mostly vegetative state. Of the people who get West Nile virus, only 1 in 100 develops encephalitis.

After four years of trying to fight off the virus with multiple types of treatment, Lauren lost the battle at the age of 17.



Lauren Ashley Miller



>> DID YOU KNOW?

Hantavirus is endemic in our county. Hantavirus, a disease transmitted by deer mice, is one of the most dangerous diseases on the planet. An infected person's lungs fill with fluid and they can be dead within 3 days. In November 2012, the National Park Service announced a total of 10 confirmed human cases of Hantavirus at Yosemite National Park. Thirty percent of the people infected died.

Water Sources

MVC constantly monitors for the presence of vector-borne diseases, and inspects poultry ranches, dairies, and riding academies for nuisance flies and other vectors. MVC technicians also provide direct abatement and control of vectors in sanitary sewer systems, private water sources (green pools and spas), and flood control channels and basins.

Plague

In 2013, several campsites in San Bernardino County were closed after a ground squirrel tested positive for the plague. People can get plague when they are bitten by a flea that carries the plague bacteria from an infected rodent such as a rat, squirrel or chipmunk. When infected with plague, a person may get sudden chills, fever, muscle pain, seizures, and painful, swollen lymph nodes all over their body. MVC continuously conducts routine surveys and monitors for plague, and the fleas that carry it.



California State Association of Counties' Challenge Award

Each year, MVC collaborates with San Bernardino County Sheriff's Aviation Division in utilizing aerial surveillance to target unmaintained swimming pools in residential neighborhoods in order to reduce mosquito breeding. This allows MVC to efficiently inspect, treat, and abate the mosquito breeding hazards in previously unknown locations. With the help of the Aviation Division during the 2012 mosquito season, it is estimated that MVC potentially prevented the production of 990 million mosquitoes per week, thus greatly reducing the potential prevalence of WNV. DEHS was awarded a California State Association of Counties (CSAC) Challenge Award for these collaborative efforts in reducing and preventing the prevalence of WNV.



Emerging Threat

MVC technicians conduct surveillance on the various species of mosquitos present in San Bernardino County and the diseases they carry. The Asian Tiger Mosquito is currently breeding in Los Angeles County and could be in our county within a few years. The Asian Tiger Mosquito is capable of carrying the deadly disease dengue. Our surveillance efforts are crucial in monitoring this emerging threat as well as other threats that could endanger our county.

DID YOU KNOW?

A female mosquito can produce over 400 million offspring in a single season, even if only 25% of each generation survives.

“Sleep tight—don’t let the bed bugs bite!”

Do you go shopping for clothes? Do you go to the movie theater? Do you ever travel by bus or airplane? Do you stay in a hotel on vacation? Do you shop at flea markets or thrift stores? If you answered yes to any of these questions, you are at risk for bringing bed bugs back to your home.



Vector-Borne Diseases by the Numbers

About 75% of recently emerging infectious diseases affecting humans are vector-borne and approximately 60% of all recognized human pathogens are transmitted by vectors.

What would life be like without MVC?

- Public health issues would increase from various vector-borne diseases such as malaria, yellow fever, dengue, West Nile Virus, plague, encephalitis viruses, Rift Valley Fever, Hantavirus, and Chinkungunya.
- People would have a lower quality-of-life due to annoyance caused by vectors like rodents, flies, bed bugs and mosquitoes.
- Domestic animals and wildlife such as horses, canines, birds and even endangered species would be killed by diseases transmitted by various vectors.
- There would be devastating economic problems and negative impacts on local communities due to decrease in attendance of outdoor events and activities such as ball games at the Quakes Stadium, shopping at Victoria Gardens, or camping at Joshua Tree National Park.



Click here to learn more about DEHS's Mosquito and Vector Control section online!



SOLID WASTE SECTION

Land Use Protection Program



National Priorities of Hazardous Waste Site

Hidden Lane Landfill, a 30-acre unlined landfill site was established in 1971 in Loudoun County, Virginia. The site was permitted to accept only construction debris and solid, municipal waste. However, the landfill was closed in 1984 because it was found to be accepting other materials such as hazardous waste. Hidden Lane Landfill's improper collection and storage of waste led to groundwater contamination. Testing revealed high levels of chlorinated volatile organic compounds (VOC), such as trichloroethene, a human carcinogen. Low-levels of exposure over an extended time period of VOCs may lead to liver problems, kidney problems and cancer. Due to the severity of contamination levels, Hidden Lane Landfill was added to Environmental Protection Agency's (EPA) National Priorities List of most hazardous waste sites in 2008.

Why does DEHS regulate solid waste facilities?

Have you ever experienced the stench of rotting garbage? Odor can be a public nuisance and is unpleasant to experience. Garbage also attracts vectors such as mice or rats. Methane gas is generated from the decomposition of the garbage and can be a serious health and safety problem for both operators and the community if not properly controlled. In addition to emissions of known carcinogens, the EPA also reported numerous "cases of acute injury and death caused by fires and explosions related to municipal landfill gas."



DID YOU KNOW?

Each year, the total volume of solid waste produced in America is equal to the weight of more than 5,600 Nimitz Class aircraft carriers, 247,000 space shuttles, or 2.3 million Boeing 747 jumbo jets.



DID YOU KNOW?

If a day's worth of all the solid waste collected in the U.S. were in a line of average-sized garbage trucks, that line of trucks could cross the country, extending from New York City to Los Angeles, more than 100 times.



What is DEHS's role?

DEHS has been designated by the state as the Local Enforcement Agency (LEA) for the County. The LEA inspects solid waste facilities to ensure compliance with state laws. These facilities include landfills, composting facilities, material recovery facilities, and transfer stations. The enforcement efforts of DEHS promote health and safety by ensuring proper storage, collection and disposal of solid waste.



Have you ever thought about what San Bernardino County would be like without proper solid waste disposal?

Garbage would pile up and create noxious odors without proper disposal. Loose materials would be blowing around in the air, flying from one area to another. Insects and rodents would be attracted to the garbage and disperse to nearby neighborhoods. Poorly engineered landfills may cause harmful environmental effects over time. For example, contaminated water that reaches ground or surface water can pollute wells used for drinking water.

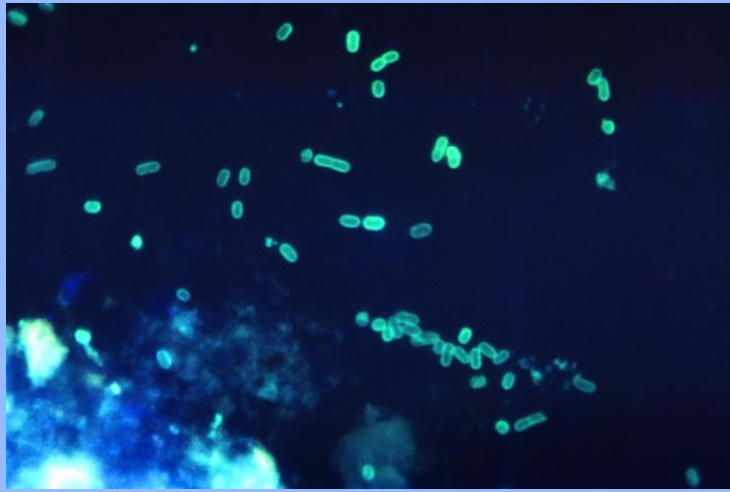


Click here to learn more about DEHS's Solid Waste section online!



SAFE DRINKING WATER SECTION

Land Use Protection Program



E. Coli bacteria found in water

Canada's Worst-Ever *E. coli* Outbreak

In May 2000, numerous residents of the Walkerton community in Ontario, Canada experienced bloody diarrhea and other gastrointestinal symptoms related to *E. coli* infections. The Walkerton Public Utilities Commission provides public water for the town. The Commission disregarded lab test results showing that the water supply was highly contaminated with *E. coli*. The contamination was traced to farm runoff next to a vulnerable water well. As a result, about 2,500 residents became ill and 7 died from drinking the contaminated water. In addition, Walkerton residents and local businesses lost nearly \$2 million. This tragedy could have been prevented if the water well had been properly protected.

Safe Drinking Water

DEHS ensures that water served to the public is safe and obtained from a protected source. Inspections by DEHS help to protect the public's health from natural and manmade contaminants and the transmission of waterborne diseases.

DID YOU KNOW?

Every 8 seconds, somewhere in the world a child dies from contaminated water. Twenty-five million people die each year from contaminated water. That is equivalent to the entire population of Canada.





Ongoing Safety Efforts



Under the authority of the state, DEHS inspects small public water systems to ensure minimum safety standards are met. These standards include analysis and treatment of possible constituents in the water, such as arsenic, nitrates and chromium, to ensure they are below maximum contaminant levels. DEHS is also involved with:



- The approval of well construction/destruction
- Mitigation of groundwater contamination and other hazards
- Cross-connection/backflow prevention tester certification



DID YOU KNOW?

In Bellevue, Ohio, public and private wastes were dumped into sinkholes and wells beginning in 1872. Over 120 years later, those wastes still show up in drinking water. In some wells, raw sewage from that era, including undecomposed toilet tissue, can be found.

Collaborating with Industry

DEHS provides technical assistance and works in partnership with operators of small public water systems to ensure that drinking water is safe throughout San Bernardino County. Educational efforts are used to help facility operators and other stakeholders achieve compliance with laws and regulations.



What would happen without water protection efforts?

- Water may become contaminated with bacteria, total coliforms, *E. coli*, nitrates, herbicides and pesticides.
- Infectious waterborne diseases such as typhoid, cholera, paratyphoid fever, Hepatitis A and amoebic dysentery would spread.
- Build-up of bacterial slimes in irrigation wells may clog pumps and pipes.
- The community would experience significant costs related to water well treatment or replacement.



Click here to learn more about DEHS's Water section online!



WASTEWATER SECTION

Land Use Protection Program





Septic System Failure



Quail Valley, a residential community of Menifee, CA, was developed in the 1920s. During that time, several vacation homes were built on small lots with septic systems. These small areas of land had high levels of groundwater and poor soil, resulting in several septic system failures. In 2005, 37% of the residents had sewage discharge on the ground's surface and in the streets. Due to the contaminated run-off, the community's recreational lake and potable water supply reservoir, Canyon Lake, was deemed impaired due to bacteria, nitrogen and phosphorus by the United States Environmental Protection Agency.

DEHS Role in Wastewater Management

The DEHS Wastewater Section has been designated as the regulatory authority for wastewater treatment systems by the three regional water quality control boards in the County. This section ensures all wastewater treatment systems are properly designed through on-site testing and review of percolation reports. There are areas within the County where wastewater cannot be properly disposed of by wastewater treatment systems due to geological factors. Costly, specially-designed sewage holding tanks are required in these areas.



DID YOU KNOW?

Improperly treated sewage that contaminates nearby surface waters also increases the chance of swimmers contracting a variety of infectious diseases. These range from eye and ear infections to acute gastrointestinal illness and diseases like hepatitis.



Ongoing Safety Efforts



With one-fourth of U.S. homes using septic systems, more than 4 billion gallons of wastewater per day is dispersed below the ground's surface. Inadequately treated sewage from septic systems can cause groundwater contamination and pose a significant safety issue to drinking water.



DID YOU KNOW?

A key reason to maintain septic systems is to save money. Failing septic systems are expensive to repair or replace, and poor maintenance is often the culprit. Having septic systems inspected regularly is a bargain when considering the cost of replacing the entire system.



What could happen without septic system regulation?

- Septic system failure may pollute groundwater and surface water.
- Nuisance odor and other aesthetic problems might occur if a septic system is not properly maintained
- Unmaintained septic systems may lead to environmental contamination and spread diseases that affect humans, plants and wildlife.
- The build-up of flammable organic gases might lead to fires.



Click here to learn more about DEHS's Wastewater section online!



LAND USE SECTION

Land Use Protection Program





DEHS Ensuring Proper Land Use



DEHS protects the public by preventing and mitigating environmental degradation through effective land use planning. Through careful plan evaluation and detailed project conditions reports, DEHS ensures that each land use project meets applicable state and local land use standards for:



- Domestic water supply
- Sewage and solid waste disposal
- Noise
- Vector control
- Food
- Other factors related to environmental health and safety



DID YOU KNOW?

San Bernardino County covers over 20,000 square miles of land, and almost three-quarters (74%) of that land is open or undeveloped.

A Noisy Battle



Without proper land use oversight, communities are put at risk for environmental problems, such as excessive noise. Airports all around the world have been at the forefront of this issue, particularly when expansion efforts are made. It was reported that Dania Beach, Florida, was gearing up for battle involving expansion of the Fort Lauderdale-Hollywood International Airport in 2012. In fact, the city allocated nearly \$1 million in funds to fight lawsuits in federal and state court. Expansion of the airport commenced in January with the construction of a new runway. Unfortunately, this expansion would expose nearly 2,500 residents to high levels of sound that are considered incompatible with residential use. The city would like to avoid this situation; however, legal efforts to halt the project have not panned out. Ultimately, residents near the airport stand to lose the most through falling property values and possible forced relocation.



DEHS Land Use Projects



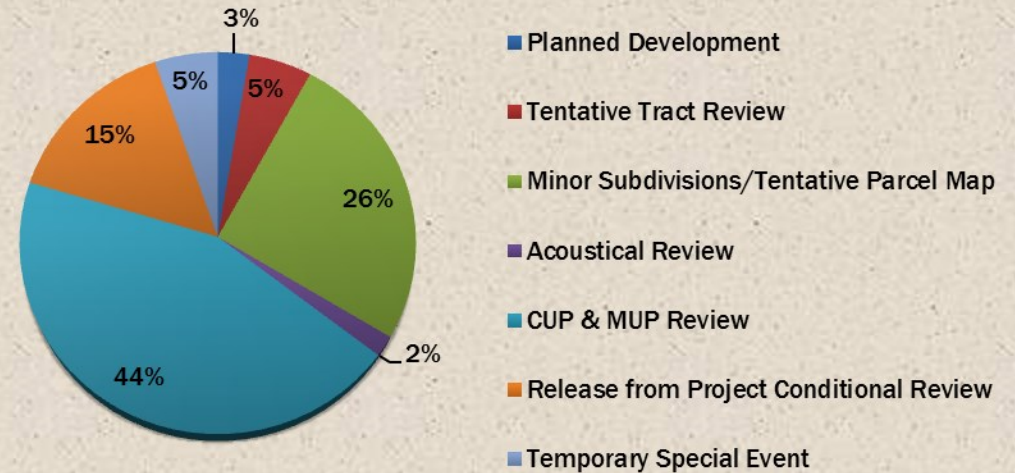
During the 2013 calendar year, DEHS evaluated approximately 113 land use projects. The chart to the right displays the percentages of each type of project evaluation.



DID YOU KNOW?

In 2000, approximately 1.7 million Americans lacked basic plumbing facilities.

LAND USE PROJECTS EVALUATED IN 2013



Land Without Proper Planning

Many health hazards could potentially arise and directly affect the surrounding environment and those that reside therein, if land use was not properly planned. For example, an airport built next to a school without a proper sound barrier would create a health hazard associated with the extreme noise. A poultry ranch placed next to a residential community would potentially cause a fly nuisance in the neighborhood. Septic systems installed in undersized lots would put homeowners at risk of sewage overflow and groundwater contamination. Lot splits without appropriate oversight would lead to financial setbacks for the homeowners, and undue economic burdens for the community. Through proper land use evaluation and planning, DEHS aims to prevent environmental hazards and promote healthy development in order to maintain safe and thriving communities within San Bernardino County.





MEDICAL WASTE SECTION

Land Use Protection Program



Medical Waste Horror

The biggest challenge South Africa's medical waste industry faces is the lack of compliance with proper disposal procedures, resulting in illegal dumping of medical waste. On November 28, 2009, over 300 tons of highly infectious raw medical waste was found in the backyard of a brick factory in Welkom, Free State. This was the biggest illegal medical waste dumping to date in the country. The factory's backyard was filled with bloody swabs and bandages, used needles, discarded pills, vials, and body parts collected from South Africa's biggest state and private hospitals.



"What's Up, Doc?"

Healthcare workers are trained to handle and dispose of all medical waste properly and safely. However, there are times when syringes are reused, contaminated bandages are mixed in with everyday garbage, and radioactive waste is found abandoned in public areas. The improper handling and storage of medical waste exposes healthcare workers, patients, communities, and the environment to unnecessary risks associated with different infections and diseases.



DEHS Ensuring Proper Disposal

Designated by the State as the Local Enforcement Agency (LEA), DEHS ensures all medical waste facilities are in compliance with the Medical Waste Management Act. DEHS provides oversight of the handling, storage, treatment, and disposal of medical waste to protect the public from potentially communicable diseases.

DEHS regulates medical waste generators. Large-quantity medical waste generators are inspected by DEHS annually. DEHS maintains a registration database of small-quantity generators, which are inspected on a complaint-driven basis.



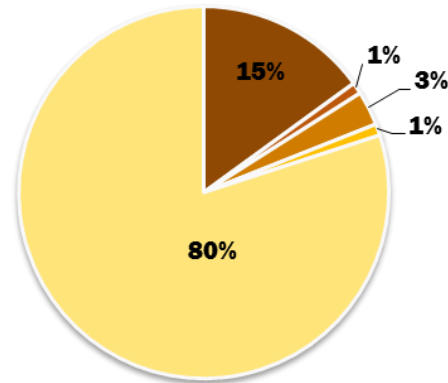
Putting Waste into Numbers



According to the World Health Organization (WHO), medical waste makes up 20% of the total amount of waste generated by healthcare facilities. As seen in the chart on the right, sharps represent only about 1% of the total waste generated. However, they are a leading source of disease transmission and injury when improperly handled. In 2000, approximately 21 million hepatitis B virus infections, 2 million hepatitis C virus infections, and 260,000 HIV infections were caused by injections from contaminated syringes. Many of these infections could have been avoided if the syringes had been disposed of safely.



Types of Waste Generated by Healthcare Facilities



- Infectious and anatomic wastes
- Sharps
- Chemicals and pharmaceuticals
- Genotoxic waste, radioactive matter, heavy metal content
- General waste

DID YOU KNOW?

The Environmental Protection Agency estimates that about 2 million tons of medical waste from hospitals are produced yearly. This figure represents about 2% of the total municipal solid waste stream. Other estimates, though, range from 2.1 to 4.8 million tons annually.

Consequences of Improper Medical Waste Handling

- Improper disposal of expired drugs and sharps in regular trash might be accessible to the public, thus causing a safety hazard.
- Illegal disposal of pharmaceuticals may enter an aquifer, surface water, or drinking water system and contaminate drinking water.
- Untreated medical waste may lead to the exposure of people to infections and disease.



Click here to learn more about DEHS's Medical Waste section online!



BODY ART SECTION

Land Use Protection Program



Tattoo Infections Traced to Non-sterile Water in Ink



There were more than 22 confirmed cases of *Mycobacterium chelonae* in 2012 in the U.S with an additional 27 possible cases. The sources of these infections were traced to the use of nonsterile water in the ink. Without proper treatment, these infections can lead to lung disease, eye problems, joint infections, and other serious organ infections. According to the Food and Drug Administration, this bacterium is often difficult to diagnose and requires at least 6 months of treatment.

Statewide Law to Standardize Safety

On October 9, 2011, Assembly Bill 300 (AB 300), otherwise known as the Safe Body Art Act, was signed into law by Governor Jerry Brown with an effective date of July 1, 2012. The purpose of this law is to provide statewide standards for the oversight and regulation of persons engaged in the business of tattooing, body piercing, application of permanent cosmetics, and branding.



DEHS Keeping it Safe

DEHS protects public health by ensuring that every body art practitioner is registered within the County. DEHS inspects all body art facilities annually to minimize blood-borne pathogen risk factors and other conditions that contribute to the spread of infection or disease.

>> DID YOU KNOW?

The tattooing industry grosses about \$1.65 billion per year, and represents the 6th fastest growing industry in the American economy. There are an estimated 16,000 body artists and 21,000 tattoo studios operating in the US. At least one new shop opens every day.



Ongoing Safety Efforts



Over the last fiscal year (2012-2013), DEHS conducted nearly 100 routine inspections and 40 follow-up inspections at body art facilities in the County. Nearly 650 violations were cited with an average of nearly 5 violations per inspection. This average is expected to drop as DEHS continues inspecting body art facilities and the practices of body art practitioners.



DID YOU KNOW?

American Red Cross officials say people with tattoos can donate blood if their body art was done by a state-regulated body art facility using sterile needles and ink that was not reused. If not, donors—including those who received body art in unregulated states—must wait 12 months after receiving the tattoo before they give blood.

The Body Art World Without DEHS

- Body artist practitioners may not obtain proper blood-borne pathogens exposure training, thus increasing exposure to blood-borne pathogens such as hepatitis B virus, hepatitis C virus, or human immunodeficiency virus (HIV).
- There may be an increase in bacterial infections among body artist practitioners and clients
- Body art practitioners would not be held accountable for following proper safety practices.



Click here to learn more about DEHS's Body Art section online!



HOUSING SECTION

Community Environmental Health Program



Living in Raw Sewage



In 2009, DEHS came across a housing nightmare in San Bernardino County. A failed septic system at an apartment complex resulted in overflowing sewage on the property. Several units could not flush their toilets without them overflowing, or causing sewage to leak into adjacent units. Many tenants began defecating and urinating in the unoccupied units as a result. The failed septic system led to contamination of the water supply but some people continued to drink the water. The tenants began dumping their garbage into unoccupied units since there was no pick-up service. This led to insect and rodent infestations. All of the units had to be vacated due to these imminent health and safety hazards. DEHS has been involved with rehabilitating the property since 2009. Inspectors continually monitor and re-inspect the property to ensure that people do not move back in without the rehabilitation process totally completed.



How does poor housing affect health?

Substandard housing is recognized as a major public health issue, since housing is a significant determinant of overall health. Housing problems include poor sanitation, inadequate ventilation, crowding, deterioration of structures, infestation by vermin and other disease vectors, ineffective waste disposal, and lack of utilities such as hot water, plumbing or heating. Poor housing may lead to safety hazards and a variety of infectious and chronic health problems, including asthma, respiratory infections, allergies, lead poisoning, and mental health issues.

DID YOU KNOW?

According to the National Institutes of Health, “two million Americans occupy homes with severe physical problems, and an additional 4.8 million live in homes with moderate problems.”



What are some of the housing issues seen here in the United States?



Housing with lead-tainted paint continues to be a huge public health issue. Over a million American children have dangerously elevated blood lead levels, which negatively affect their development, behavior, and intelligence. This public health problem will continue to be an issue in the future, as an estimated 24 million homes (25% of the nation's housing) has substantial lead-based paint hazards.

Substandard housing conditions such as dampness, poor ventilation, mites, mold, rodent and pest infestation, and indoor allergens all are associated with the development and worsening of asthma and other respiratory problems. About 10% of all children in the United States have asthma, and experts estimate that 40% of diagnosed asthma in children is caused by residential exposures. Many of these injuries could be prevented with improved housing conditions.



DID YOU KNOW?

Substandard housing also results in injuries around the home. Over 13.5 million nonfatal injuries occur each year in and around the home, leading to 4 million emergency room visits and 70,000 hospital admissions. Many of these injuries could be prevented with improved housing conditions.

Housing in San Bernardino County

DEHS inspects hotels and motels, bed and breakfasts, and apartments for possible environmental health hazards at least once annually. Approximately 1,300 housing inspections are conducted each year. DEHS also responds to complaints about adverse housing conditions. Any complaints regarding concerns about lead are referred to the County of San Bernardino Department of Public Health, Family Health Services Childhood Lead Poisoning Prevention Program. DEHS is also involved with rehabilitation or demolition of unsafe structures. Currently, DEHS has over 60 active property rehabilitation cases in San Bernardino County.



Housing Inspections



During an inspection, DEHS checks for adequate plumbing, functional toilets, hot and cold running water, safe electrical devices and lighting, smoke and carbon monoxide detectors, functional heaters and air conditioning, evidence of rodent or vermin infestation, sewage or waste disposal problems, general sanitation, proper ventilation, structural integrity of the building, and other possible indications of substandard housing.



To learn more about rental-housing responsibilities, see the “California Tenants—A Guide to Residential Tenants’ and Landlords’ Rights and Responsibilities” booklet [here!](#)



What would housing be like without oversight?

Without routine oversight by a regulatory agency, people who live in multi-family dwellings may be at increased risk for developing both chronic illnesses (like asthma) and infectious diseases due to negative environmental exposures. DEHS ensures that property owners and landlords provide safe housing for their tenants. When DEHS inspectors observe violations such as sewage overflows, lack of hot water (or no water at all), vermin infestations, inadequate waste disposal, lack of heating, structural problems, or other signs of substandard housing, they require the landlord to mitigate the situation. DEHS helps to safeguard the tenants’ health and safety by conducting routine inspections as well as responding to complaints.



Click here to learn more about DEHS’s Housing section online!



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ORGANIZED CAMPS

Community Environmental Health Program



Organized Camps in San Bernardino County



San Bernardino County has 68 organized camps, more than any other jurisdiction in the state. Approximately a quarter of a million children come to these camps to enjoy outdoor activities, arts and crafts, swimming and aquatics, and other recreational events every year.



Organized camps are unique because they have multiple aspects of environmental health: pools/lakes for swimming, cabins for housing, and kitchens for food preparation. DEHS inspectors conduct inspections at organized camps to evaluate overall safety in kitchens, housing, pools and lakes and other recreational areas.



DID YOU KNOW?

More than 11 million people attend organized camps in the United States each year. Over 500,000 people attend organized camps in San Bernardino County each year.

Illness Outbreak at a Camp

In the summer of 2011, a large outbreak occurred at a camp in the mountains of San Bernardino County. The illness passed from camp staff to campers. Their symptoms included vomiting and diarrhea. The rapid increase in the number of sick people overwhelmed the camp nurse, who also became ill. Out of 130 campers and staff, a total of 39 people became sick during this outbreak.

The camp closed and all surfaces were thoroughly sanitized before re-opening five days later. The camp health staff monitored the returning campers for health issues. This outbreak may not have occurred had there been proper health screenings at the beginning of camp.





Camp Lodging

DEHS inspects the cabins, tents and other housing accommodations. Camp facilities are examined for overall maintenance, sanitation and fire safety.



Health and Safety at Camps

DEHS reviews current health logs, pre-screening of campers and staff for illness, the condition of the infirmary, fire drill procedures, and the camp's site-specific emergency plan including evacuation procedures. DEHS also works with camp operators to ensure conditions are safe before campers and staff return to the camp after a natural disaster has occurred.

DID YOU KNOW?

Organized camps are a \$15 billion industry. There are over 7,000 overnight camps and 5,000 day camps in the U.S. More than 1.5 million adults are employed at camps throughout the country.

Safe Outdoor Recreational Activities

Zip lines, ropes courses, climbing walls, and other outdoor activities are inspected for functionality, proper maintenance, and safety.



What would life be like without DEHS?

Camp life often involves eating, sleeping, and collaborating in close proximity, and these conditions increase the probability for an illness to spread and an outbreak to occur. Without regular oversight from DEHS, campers and camp staff are at greater risk of becoming ill. Ill staff and ill campers would attend camp and infect other participants, if health screenings were not required. The onset of an outbreak would not be identified if health logs were not maintained, and new groups of campers would contract the illness if health care and sanitation procedures were not in place.



Click here to learn more about DEHS's Organized Camps section online!



EMERGENCY OPERATION RESPONSE



Old Fire



In October 2003, the *Old Fire* burned over 90,000 acres, destroyed nearly 1,000 homes and caused 6 deaths. The wildfire threatened San Bernardino and Highland, as well as the mountain resort communities of Cedar Glen, Crestline, Running Springs and Lake Arrowhead. The fire forced more than 30 communities and over 80,000 residents to evacuate their homes. Part of the campus of California State University-San Bernardino burned during the fire.



DEHS as Emergency Responders

DEHS mitigates public health risks from disasters such as wildfires, earthquakes and other emergencies, and plays a major role in disaster recovery efforts. DEHS has developed a plan that provides guidance and direction for staff on how to respond to such emergencies. The role of department staff in an emergency will vary according to the type and severity of the situation, as well as location of the emergency. DEHS focuses on food safety, vector surveillance, safe drinking water, waste management and public outreach.

Food Protection

DEHS's Food Protection Section conducts field surveys to assess damage to food storage and handling facilities. DEHS acts in a consultative capacity to food facilities, hospitals, feeding centers, and shelters to ensure proper food handling practices. DEHS also provides information to industry and the public regarding protection of perishable foods under emergency conditions, and gives advice on the sorting and disposal of food which may be contaminated. DEHS also monitors food safety practices at emergency shelters and food distribution points. DEHS takes action to enforce regulations when necessary to protect public health and safety.





Vector Surveillance

During a disaster, MVC assesses the potential for increases in fly, rodent and mosquito populations that may result from damage to the infrastructure. Damaged sanitary sewer systems, solid waste that cannot be properly disposed of, and stagnant water from broken water pipes are monitored, and the pests that they attract and breed are controlled.

DID YOU KNOW?

At 4:31 A.M. on January 17, 1994, an earthquake with a 6.7 magnitude struck the San Fernando Valley and lasted for about 10-20 seconds. It caused 57 deaths, injured nearly 9,000 people, and closed 7 freeway sites and 2 hospitals. It also left 150,000 people without water, 40,000 without natural gas and 25,000 homeless. This earthquake caused more than \$20 billion in property damage, making it one of the costliest natural disasters in U.S. history.

Safe Drinking Water

The Water, Wastewater, and Land Use Sections contact water purveyors in damaged areas to determine if water services have been affected by a disaster. DEHS assists in the assessment of compromised water systems, documents damage, and performs appropriate testing/sampling at affected locations. DEHS also works with local media to inform residents of damaged water systems and works with water purveyors to issue boil water orders. DEHS assists in the restoration or replacement of facilities for treatment, storage, or distribution of water.





Waste Management

DEHS's Solid Waste Section/Local Enforcement Agency (LEA) works with waste management entities affected by a disaster. DEHS also processes emergency waivers and permits, reviews and approves the altering of existing permits, and oversees the establishment of temporary solid waste handling facilities. This process allows debris from a declared state or local emergency to be disposed of at a solid waste facility.



DID YOU KNOW?

Natural disasters can generate overwhelming amounts of solid waste, forcing communities to use other disposal options. **Seven million cubic yards of disaster debris** was generated from the Northridge Earthquake in 1994. In efforts to conserve remaining landfill capacities, Los Angeles created over 10,000 tons of new, privately operated space for the debris.



Public Outreach

The Health Education Section distributes environmental health information specific to the emergency (i.e. foodborne illness prevention/food safety information, potable water recommendations, vector control measures, etc.). Emergency communication methods include press releases, social media outreach, electronic alerts via an email registry, and distribution of brochures and fact sheets.



Click here to learn more about DEHS's Emergency Operations Response online!



COMMUNITY OUTREACH



DEHS Reaching Out



DEHS helps facility operators and other stakeholders achieve compliance with various laws and regulations through inspections and educational efforts. Many tools are utilized to communicate timely and useful information with facility operators, stakeholders and the general public throughout San Bernardino County as a part of DEHS's educational efforts.



DEHS Website

DEHS's website contains information about all the programs within our Division as well as helpful links that benefit the County's operators and the general public. Visit DEHS's website here: www.sbcounty.gov/dph/dehs.



Industry Roundtables

In 2012, DEHS launched a series of Industry Roundtables. An Industry Roundtable is an open forum where operators can hear about Division updates, learn more about inspection procedures, and participate in a Q&A session with the DEHS management team. Not only do Industry Roundtables keep operators updated with DEHS, but they also allow operators to communicate their needs and concerns to the Division.



Social Media

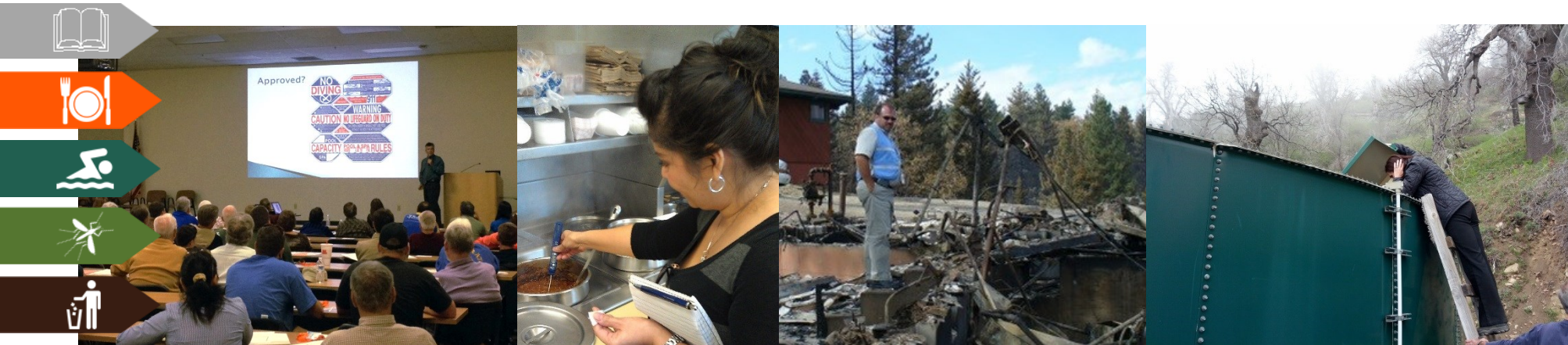
Social media platforms are an effective and efficient way to quickly post information related to DEHS services. Users of multiple age groups can easily share information with their own network. All of DEHS's social media platforms are available in English and Spanish. Click on the icons below to "like" and/or follow DEHS on Facebook, Pinterest, YouTube, Twitter, and Instagram.



Educational Newsletters

DEHS publishes several free educational newsletters that include helpful information for industry operators as well as the general public. *Camp News* provides health and safety tips for operators, parents and children at organized camps. *FoodWise* covers food safety and foodborne illness prevention. *Mosquito and Vector Control* contains prevention tips on West Nile Virus and other vector-borne diseases. *Pool of Knowledge* features drowning prevention tips and water safety information. Click on a newsletter below to learn more.





COUNTY OF SAN BERNARDINO
Environmental Health Services
 DEPARTMENT OF PUBLIC HEALTH

DEHS plays a vital role in protecting San Bernardino County businesses, residents and visitors from the effects of disease, injury and major economic losses. Environmental health affects everyone in their daily lives as you have discovered through this document. Programs within DEHS strive to deliver business-friendly services that promote healthy and sustainable communities whether you are eating food, drinking water, swimming, or staying at a hotel.

DEHS aims to bridge gaps in the community and industry, and strives to achieve common goals related to public health through partnership development. Our educational efforts continue to demonstrate successful compliance with laws and regulations established by the State of California with our ongoing outreach to facility operators and other stakeholders.

